7KZ6

Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

FRAME-GRID CONSTRUCTION — DARK HEATER

For Video-Output Service in Color-TV Receivers

ELECTRICAL CHARACTERISTICS

Bogey Values[a]

Heater Voltage (AC or DC)	E_h	7.3	V
Heater Current	I_h	0.450	A
Heater Warm-up Time		11	s
Direct Interelectrode Capacitances			
Without external shield			
Grid No.1 to plate	c_{g1-p}	0.16 max	pF
Input: G1 to (K, G3 + IS, G2, H)	c_i	13.0	pF
Output: P to (K, G3 + IS, G2, H)	c_o	6.0	pF

For the following characteristics, see Conditions

Plate Resistance (Approx.)	r_p	45	kΩ
Transconductance	g_m	24000	μmho
DC Plate Current	I_b	25	mA
DC Grid-No.2 Current	I_{c2}	3.6	mA
Cutoff DC Grid-No.1 Voltage	$E_{c1(co)}$	-5.2	V

Conditions

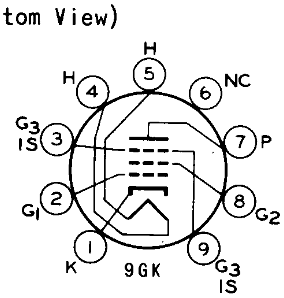
Heater Voltage	E_h	7.3	V
DC Plate Supply Voltage	E_{bb}	250	V
Grid No.3	-	Connected to cathode at socket	
DC Grid-No.2 Supply Voltage	E_{cc2}	115	V
DC Grid-No.1 Supply Voltage	E_{cc1}	0	V
Cathode Resistor	R_k	75	Ω

MECHANICAL CHARACTERISTICS

Operating Position	Any
Type of Cathode	Coated Unipotential
Maximum Overall Length	2.625 in
Maximum Seated Length	2.375 in
Length, Base Seat to Bulb Top. Excluding tip	1.906 to 2.094 in
Maximum Diameter	0.875 in
Dimensional Outline (JEDEC 6-3)	See *General Section*
Envelope	JEDEC T6-1/2
Base	Small-Button Noval 9-Pin (JEDEC E9-1)

TERMINAL DIAGRAM (Bottom View)

Pin 1 – Cathode
Pin 2 – Grid No.1
Pin 3 – Grid No.3 Internal Shield
Pin 4 – Heater
Pin 5 – Heater
Pin 6 – No Internal Connection
Pin 7 – Plate
Pin 8 – Grid No.2
Pin 9 – Same as Pin 3



DESIGN-MAXIMUM RATINGS

For operation as a Class A_1 Amplifier Tube

Plate Voltage	E_b	330	V
Grid-No.2 (Screen-Grid) Supply Voltage	E_{cc2}	330	V
Grid No.2 Voltage	E_{c2}	See *Grid-No. 2 Input Rating Chart* at front of Receiving Tube Section	
Grid-No.1 (Control-Grid) Voltage			
Positive-bias value	E_{c1}	0	V
Heater-Cathode Voltage			
Peak	e_{hkm}	±200	V
DC	E_{hk}	100	V
Heater Current	I_h	0.420 to 0.480	A
Grid-No.2 Input			
For $E_{c2} \leq 165$ V	-	1	W
For $E_{c2} \geq 165$ and ≤ 330 V	-	See *Grid-No. 2 Input Rating Chart* at front of Receiving Tube Section	
Plate Dissipation	P_b	9	W

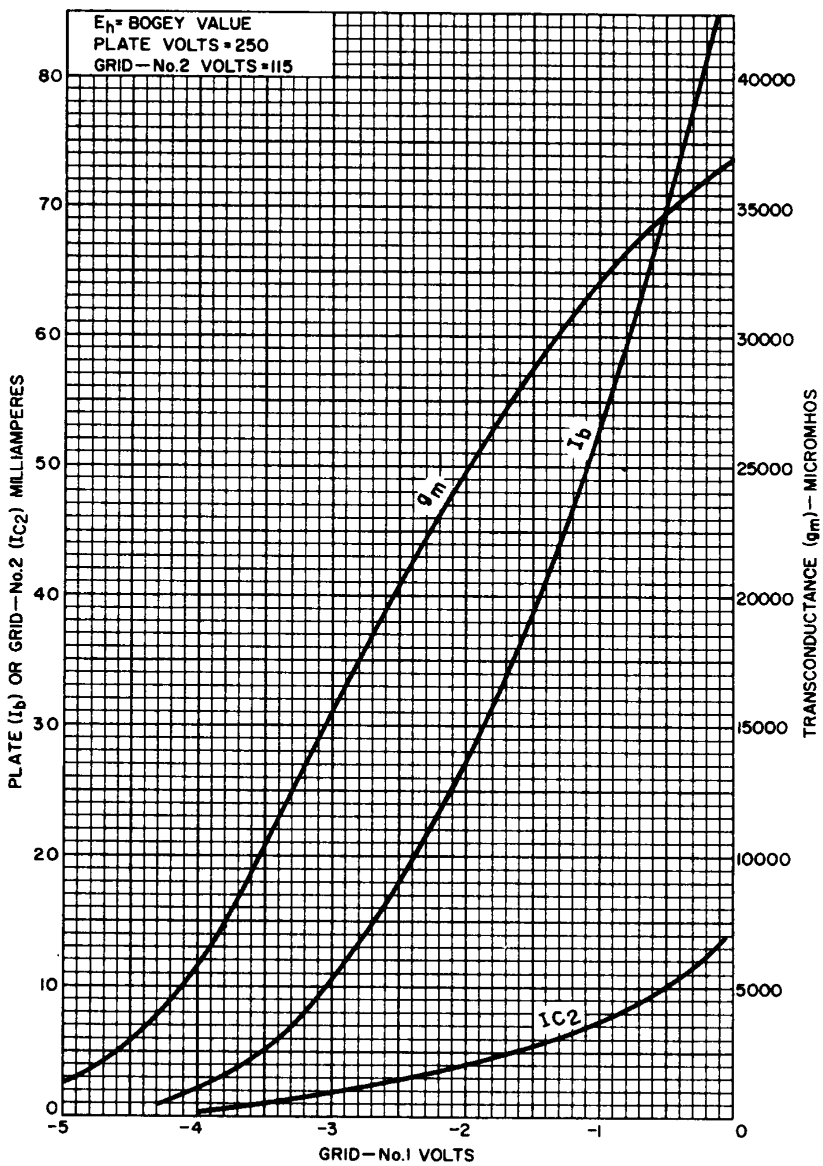
MAXIMUM CIRCUIT VALUES

Grid-No.1 Circuit Resistance	$R_{g1(ckt)}$		
For fixed-bias operation	-	0.1	MΩ
For cathode-bias operation	-	0.25	MΩ

[a] Unless otherwise specified.

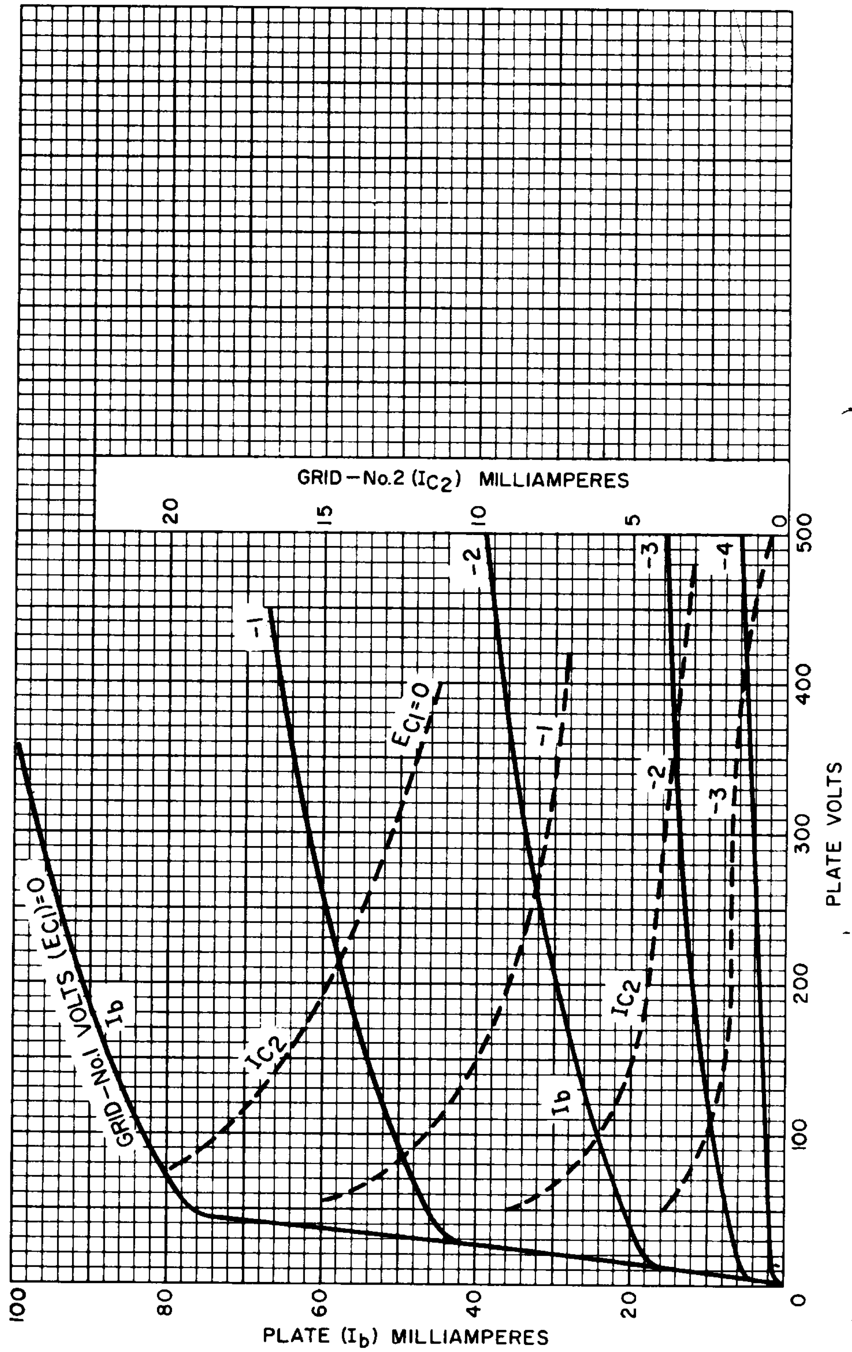
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Typical Characteristics



92CM-14533

Typical Characteristics



92CM-14532

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